

### **ABSTRACT OF THE DISCLOSURE**

A Raman pump module for generating pump radiation having a pump wavelength ( $\lambda_p$ ) for coupling into a transmission fiber of an optical wavelength division multiplex (WDM) communication system to provide Raman amplification of WDM radiation counter propagating therethrough is disclosed. The pump module is for use in a communications system in which the WDM radiation has a transmission waveband ( $\lambda_s$ ) and wherein the transmission fiber has a zero dispersion wavelength ( $\lambda_m$ ) lying midway between the transmission waveband and the pump wavelength. The module comprises a Raman pump laser for generating the pump radiation and a de-correlator for de-correlating the longitudinal modes of the pump radiation before it is coupled into the transmission fiber.